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In memoriam Jenő DADAY

By

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Species tot numeramus quot diversae formae a hominibus doctis selectae descriptaeque sunt. (DADAY)[+]

A new branch of biological sciences, hydrobiology gained civil right just over a century ago, and one of the pioneers of this science in Hungary, and at the same time a world-renowned expert on aquatic invertebrates was Jenő (= Eugene) DADAY.

The DADAY family has been one of the oldest families of intellectuals in Hungary. János DADAY lived between 1600 and 1668 and his name has been commemorated in the "Régi Magyar Könyvtár" (Ancient Hungarian Library) publication of the Hungarian Academy of Sciences for his talents as a writer (ENTZ, 1925). His decendant, Jenő DADAY was born in 1855 at Búzamező, the County of Szolnok-Doboka (today Roumania).

DADAY received his primary schooling, as well as his secondary school education at Kolozsvár, where he was graduated from the gymnasium in 1874. In the same year he enrolled in a course in natural history and education at the Mathematics and Natural History Faculty of the University of Kolozsvár. He received his Ph. D. in natural history in 1878. In the same year he was offered a post of an assistant in the Department of Zoology and Comparative Anatomy at the University of Kolozsvár, which was headed at that time by Géza ENTZ, sen. In 1882 he was promoted to assistant professorship and he gave a course entitled "Invertebrates of inland waters". He spent the period from September 1885 to May 1886 on a scholarship at the famous Stazione Zoologica of Naples. After his return, he taught for a short period in a high school in Kecskemét and it is from this position that he applied for an assistant curatorship at the Department of Zoology of the National Museum which became vacant at that time. He filled this post for 15 years. In 1888 he was also offered to be assistant professor at the University of Budapest[++] and was elected to become an associate member of the Hungarian Academy of Sciences in the following year. In 1902 he was offered the chair of Zoology at the Budapest Institute of Technology.[+++] On Géza HORVÁTH's and Géza ENTZ's recommendation, he was elected to become a full member of the Hungarian Academy of Sciences in 1910.

Contemporaries of DADAY described him as a tall, black-haired reserved man with strict eyes, who placed any value only on hard work. His family life was marred by a number of tragedies. His mother's suicide in 1883 left deep marks on his mood. His first wife died in 1887 shortly after they moved to Budapest. The most sorrowful one of all his losses was the death of

[+] Cited from ENTZ (1925).

[++] Pázmány Péter Tudományegyetem.

[+++] József Nádor Műegyetem.

his only son at the beginning of the First World War. The death of his son broke his strife, he did not embark on any new projects afterwards.

In the spring of 1920 he fell ill, contracted bronchitis and his condition was worsened by asthma that he was suffering from ever since his early youth. He died on the 2nd of April, 1920.

DADAY worked with unparalleled diligence; he worked a lot and with great speed. His scientific work of over 40 years were published on over 7 000 printed pages in various Hungarian and foreign journals. Papers containing species lists of just a few pages, as well as monographs several hundred pages long may also be found among his works. He published on over 100 scientific topics, altogether 225 papers and books mark his achievements in Hungarian and various foreign languages[+]. He studied practically every phylum, ranging from protozoans to mammals. He discovered the following taxa new to science: 3 suborders, 8 families, 12 subfamilies, 42 genera, 9 subgenera, 801 species and 103 varieties. Apart from systematics, he also published in zoogeography, ecology, and even histology and anatomy.

DADAY was asked to study materials housed in several large museums in Europe (e.g. Paris, Berlin, Leningrad) and he was commissioned to report on material collected by several renowned expeditions of his time. It is through his works that new data were obtained on the microfauna of up to then little-known parts of the World, like the Antarctis, Paraguay, Chile, Ceylon, India, Tibet, New Guinea, Asia, German East Africa, the Victoria-Nyanza, the Nile.

DADAY's monograph on Tintinnidae is a significant contribution to protistology. He recorded many species of Nematodes, rotifers and Hydracarina from Hungary and abroad, introducing many new taxa. He wrote his thesis on the males of rotifers. DADAY obtained a lot of information about the aquatic microfauna of Hungary, this country was one of the best known areas in this respect that time. He travelled over most of the country during his collecting trips and was one of the participants in writing the fauna catalogue of Hungary in commemoration of the millenary anniversary of the establishment of the Hungarian State. He also took part in the world-renowned Balaton-project.

Besides research, DADAY's contributions are also significant in the field of popularizing science. He was commissioned by Ignác DARÁNYI, minister of agriculture to write a book entitled "A magyarországi tavak halainak természetes táplálékа" (Natural food of fish in Hungarian lakes), which was a summary in popular form of his investigations on the microfauna carried out up to that time. DADAY wrote about 50 popular papers. He wrote with a talented pen, his style was clear, and comprehensive. The great Hungarian writer, Géza GÁRDONYI praised DADAY's book on the food of fishes for its style.

DADAY was officer of the Natural History Society between 1891 and 1918. He was a founding member of the Zoological Section, for which he served as its first notary until 1901. He was editor of Állattani Közlemények for one year. He received several assignments from the Society: he prepared a bibliography of the Hungarian Zoological Literature in two parts (one for the period 1870-1880, and one for 1881-1890). This bibliography contained not only titles and citations, but also short summaries of the papers. He prepared a dictionary of Hungarian entomological names, which appeared in 1894. This is a pioneering work, containing Hungarian and Latin indices. He also prepared an index to the natural history and science periodicals found in various libraries in Budapest.

DADAY began his career in a university department, and he occupied a chair at the end of it. When he worked with Géza ENTZ, sen. at Kolozsvár, his attention was directed to the study of aquatic invertebrates, upon the subject he also gave lectures at the university. He also lectured whilst he was with the National Museum. These courses naturally also dealt with the aquatic microfauna. DADAY was also member of the National Commity for Supervision of Secondary School Teachers.

DADAY taught applied zoology from 1902 when he received the chair of Zoology in the Budapest Institute of Technology. For two years, between 1909 and 1911 he was dean of the Faculty of Chemical Engineering. He worked with great enthusiasm in setting up general

[+] The list of DADAY's publications is given by LUKÁCS (1975).

Fig. 1. Portrait of Jenő Daday with his signature
Fig. 2. Jenő Daday in his study in the Hungarian National Museum (From Magyar Salon, 1888, VIII.)
Fig. 3. Some slides from the Cladocera material of the Collectio Dadayana

Dr. Leo Lieban "Tenor"

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and applied zoological collections for teaching purposes, as well as establishing a library. Most of the collections he obtained through utilizing his many international contacts, the goverment subsidy provided to the department was used almost exclusively for acquisition of books and subscribing to journals. Based on his lecture notes, he wrote a book called "Applied zoology". As head of the department, DADAY was successor of Géza ENTZ, sen., and he managed to keep the institute alive, but upon his death in 1920 the department was finally reorganized.

Over half of DADAY's scientific works deal with Crustacea. He was one of the most renowned crustaceologists of his time, and his name is well-remembered even today. He was the first specialist in the Hungarian National Museum to work on Crustacea and he was responsible for setting up a collection, primarily made up of lower Crustacea.

DADAY was greatly interested in Entomostraca ever since his early days in Kolozsvár. He was assigned by the Transylvanian Museum Society to do several collecting trips in Transylvania, he studied the microfauna of the Kolozsvár environs, the Mts. Retyezát, the lakes Szent-Anna and Mohos and the salt lakes of Déva, etc. He published a catalogue of the Crustacea of Transylvania in 1884. Later, while on the staff of the museum, he led field expeditions to most parts of the country, he collected from the lakes of Mts. Tátra, the Lake Balaton, the Lake Fertő, the Lake Velence, around Budapest and Tata and the sodic ponds in the lowlands. He was a good collector with excellent abilities to chose the right site for collecting. An indication of his thorough, intensive collecting activity is that although he usually collected only once at a given locality, for instance, in the Lake Fertő and in many lowland sodic ponds he was able to collect surprisingly many species. First he published his results in several shorter papers, later he monographed several of the larger taxa. He described several new species of Crustacea from Hungary. Apart from their significant contribution to systematics and faunistics, his papers also contained many important data on ecological and life history aspects of the various species. He was the first to study the microfauna of the, from the limnological point of view so unique sodic ponds characteristic for the Carpathian Basin. He found that many species were characteristic for these waters: to sum up, he said "... by and large, the microfauna of the sodic waters bears the characteristics of inland waters as regards components and abundance. The constant occurrence of a few, characteristic species, however, do lend unique features to these waters." This statement is valid even today, as well, recent studies provided data only as regards the characteristic species. In spite of his great lexical knowledge, DADAY was always far too cautious to make any theoretical generalizations.

DADAY monographed the Hungarian species of Branchipus, Cladocera, Copepoda and Ostracoda, which are fundamental works of these taxa for studies in Hungary. He wrote chapters on crustaceans in the series Fauna Regni Hungariae and the Balaton monograph, also on some other taxa which no one would undertake to study (e.g. Mollusca, Pisces, etc.).

DADAY's many-sided research activity in Hungary gained him international reputation. He reported on material collected by famous Hungarian collectors of his age. Samples of plankton were collected for him by Lajos BIRO in New Guinea, by László ALMÁSI in Asia-Minor, and Ernő CSIKI collected for him on the Eugene ZICHY expedition in Russia and Siberia. Several foreign collectors also sent materials to DADAY for analysis (from Paraguay, Syria, Patagonia, India, etc.). His enormous, comprehensive studies on the plankton of these areas are fundamental works for the study of the microfauna of the inland waters for these regions of the world. DADAY contributed to the knowledge of crustaceans of German East Africa, South America, Ceylon describing 104 species of crustaceans from East Africa, 118 from Paraguay, 49 from Ceylon. Professor ANNANDALE, of the Calcutta Museum sent him a rich material from the East Indies, which was actually DADAY's last larger projects. He finished his manuscript in 1918 describing 404 species of crustaceans, but this work was never published. He monographed Phyllopoda Anostraca, and his work on Phyllopoda Conchostraca is unique, published in 5 parts between 1914 and 1927 in Paris. In this publication he dealt with material from all over the world, describing many taxa. He discussed the distribution of the species and established that the species are not much variable, but represent ancient and static forms.

DADAY's papers on the anatomy of crustaceans are also important apart from the hydrobiological and systematical papers that he wrote. He described the fine structure of the striated muscle of ostracods.

Due to his achievements and international reputation, DADAY was able to set up a collection and a very valuable library that were unparalleled at that time. After his death, his library, hydrobiological collection and microscopical preparations were entrusted to the care of the National Museum (Natural History Museum today), where his collection of reprints is housed.

His collection of crustaceans was purchased by the Museum in 1927 and is now deposited in the Crustacea Collection of the Zoological Department. The DADAY collection consists of alcoholic specimens and microscopic preparations. The majority is composed of lower crustaceans, but other taxa may also be found (e.g. protozoans, aquatic mites, worms).

DADAY's collection of crustaceans consists of about 1850 glass jars or tubes of alcoholic specimens and 1800 microscopic preparations. The majority of the alcoholic material comprise Cladocera and Ostracoda (cca. 1200 tubes), the rest Phyllopoda and Copepoda. About half of the preparations are Cladocera, the rest Copepoda and Ostracoda. The collection contains about 600 species, but unfortunately there are few type specimens designated by DADAY. Of the lower crustaceans, he described 6 families, 9 subfamilies, 30 genera, 9 subgenera, 271 species and 41 varieties, therefore a considerable interest is focused on the collection. Apart from specimens from Hungary, there are many from the materials that he reported on, including the one from the East Indies. Many noted specialists have worked on this collection and this interest is unwained today. Just to mention a few names: S. SMIRNOV and J. BRTEK on Phyllopoda, D.G. FREY, C.E. GOULDEN, N.N. SMIRNOV, N. KOROVCHINSKY, V. KOŘÍNEK and J. HRBÁCEK on Cladocera, F. KIEFER on Copepoda and W. KLIE and K.G. McKENZIE on Ostracoda.

Jenő DADAY was a world-renowned zoologist, his name was held in high esteem in scientific circles in Hungary and abroad. He received two awards from the Hungarian Academy of Sciences: the VITÉZ and the BUGÁT awards. He was elected to become member of several foreign societies, e.g. the Indian Academy of Sciences, the Anthropological and Ethnographical Society of Moscow. 18 foreign and 4 Hungarian authors dedicated 3 genera and 21 species to him.

60 years after his death, DADAY's achievements are highly regarded everywhere, his collection is even today actively being used. His achievements comprise an important chapter in the Hungarian and world-wide history of zoology.

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